

External SORT

This section provides information on using external SORT programs with Natural. It covers the following topics:

- Support of External SORT
 - Special Considerations for OS/390
 - Special Considerations for VSE/ESA
 - Special Considerations for BS2000/OSD
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Support of External SORT

The Natural SORT statement may optionally invoke an external SORT program that carries out the actual sorting. An external SORT program is used if the Natural profile parameter EXT of the macro NTSORT is set to ON.

Natural supports all external SORT programs that comply with the SORT interface documented in the relevant IBM manuals (for OS/390, VSE/ESA and CMS) and Siemens manuals (for BS2000/OSD).

The requirements (e.g. space and datasets) are identical to those for the execution of a 3GL (e.g. COBOL, PL/I) application program that invokes the operating system SORT program and can vary according to the external SORT program in use.

The communication with the external SORT program is via the E15 and E35 user-exit interfaces. As a consequence, Natural does not require the intermediate datasets SORTIN and SORTOUT.

Special Considerations for OS/390

All external SORT programs supporting the extended parameter list can be used.

Special Considerations for VSE/ESA

The external SORT program is loaded into the partition program area. For this reason, you must add round about 200K additional storage to the size requirements of the Natural batch nucleus specified in the SIZE parameter of the EXEC statement.

Example:

```
SIZE=(NATBAT31,200K)
```

If you are using a 24-bit external SORT and a shared Natural nucleus linked with RMODE(ANY), you must specify RCA=NAT2SORT and you must have created a stand-alone NAT2SORT phase; refer to Installation Procedure for Natural under VSE/ESA (in the Natural Installation Guide for Mainframes).

Special Considerations for BS2000/OSD

All external SORT programs supporting the level 1 interface can be used. Natural passes all SORT control statements to the external SORT program. SYSDTA is not used.

The external SORT program is searched for in the following libraries:

- User TASKLIB concatenated with the BLSLIB chain, if a User TASKLIB was specified,
- System TASKLIB (\$TSOS.TASKLIB) concatenated with the BLSLIB chain.

